

CHAPTER 5.2

DESIGN AND CONSTRUCTION DOCUMENTS SUBMITTALS TO OSE

5.2.1 RELATED STATUTORY AUTHORITY (See also authority listed in Part 5.1)

1. SC Code § 11-35-2720 permits the Chief Procurement Officers to prepare or review, issue, revise and maintain the specifications for supplies, services, and construction required by the State.
2. SC Code § 11-35-2730 requires that all specifications shall be written to assure cost effective procurement of the State's actual needs and shall not be unduly restrictive.
3. SC Code § 11-35-2740 permits the Chief Procurement Officers to delegate in writing to a using agency the authority to prepare and utilize its own specifications. The specifications must assure maximum cost-effective procurements that are consistent with regulations promulgated by the Board.
4. SC Code § 11-35-2750 requires that specifications prepared by architects and engineers shall be nonrestrictive and shall maximize the cost effectiveness of all procurements.
5. SC Code § 40-3-280 and SC Regulation 11-11 requires all construction documents to bear a seal of a licensed architect, when required to be prepared by a licensed architect.
6. SC Code § 40-22-270 requires all construction documents bear a seal of a licensed engineer, when required to be prepared by a licensed engineer.
7. SC Code § 40-10-250 requires a Fire Sprinkler System Specification Sheet to be completed for every fire sprinkler system to be installed in South Carolina.

5.2.2 DOCUMENT SUBMITTALS TO OSE

Agencies or their architects or engineers (A/E) must submit schematic design, design development, and construction documents to OSE for its review and approval in accordance with the procedures of this chapter. The term A/E in this chapter means the individual or firm preparing the schematic design, design development, and construction documents.

5.2.3 PROJECT NAME AND NUMBER

The Agency and the A/E must place the project name and number on all project documents and correspondence. If the project is a PIP, the project name and number is that shown on the Form A-1. If the project is a Non-PIP, the name is that assigned by the Agency and the project number is that assigned by OSE.

For meanings of Project numbers assigned to PIPs and Non-PIPs see Chapter 1 Part 1.7E.

5.2.4 DRAWINGS

Drawings submitted to OSE for review shall meet the following requirements:

1. A minimum printed font size of 1/8"
2. A maximum overall paper size of 30" x 42"
3. Drawings and Project Manuals must be bound
4. A single bound set of drawings must not exceed 25 pounds.

OSE will not review drawings and documents that are incomplete, ambiguous, or difficult to read. OSE will notify the A/E and the Agency of such condition and ask for a revised submission. OSE's statutory review period does not start to run until it receives a complete, unambiguous, and readable set of drawings and documents.

OSE may require the A/E to submit drawings and specifications in PDF format.

5.2.5 PROJECT MANUAL

This section describes the requirements for organizing OSE-mandated front-end documents for the typical construction project. The project manual must include the following in the order shown:

A. TABLE OF CONTENTS

1. Use OSE formatted Table of Contents found in Appendix A.
2. Follow the accompanying instructions to incorporate technical specifications.

B. FORM SE-310 – Invitation for Construction Bids

All sections of the Form SE-310, pages 1 & 2, must be completed with appropriate wording and boxes checked. Submit a separate copy of pages 1 and 2 with the construction documents submittal. DO NOT include page 2 in the project manual. The Form SE-310 included in the bidding documents must bear OSE project manager's signature unless the project is within the Agency's contract procurement certification.

C. AIA A701 Instructions to Bidders

The Agency may elect to omit an original document from inclusion in the project manual provided a replacement page is inserted with information stating where prospective bidders may view the document (i.e., the A/E's or Agency's offices).

D. 00201-OSE – Standard Supplemental Instructions to Bidders

E. SE-335 – Bid Bond

F. FORM SE-330 – Bid Form

1. Page BF-1
2. Page BF-1A (Delete page if no Alternate Bids or Unit Prices are included)
NOTE: The Agency and A/E may not use unit prices to determine the low bidder.
3. Page BF-2, Listing of Subcontractors
4. Page BF-3
5. Page BF-4

G. AIA A101–1997 - Standard Form of Agreement Between Owner and Contractor

A/E must insert OSE –Modifications to AIA A101-1997 but may not include the filled-out A101 in the bidding documents unless originals of the A101 are used. The Agency and A/E may elect to omit the original document from inclusion in the project manual provided a replacement page is inserted with information stating where prospective bidders may view the document (i.e., the A/E's or Agency's offices).

H. 00501-OSE – Standard Modifications to AIA A101–1997

I. AIA A201 – 1997 - General Conditions of the Contract for Construction

The Agency and A/E may elect to omit the original document from inclusion in the project manual, provided a replacement page is inserted with information stating where prospective bidders may view the document (i.e., the A/E's or Agency's offices).

J. 00811-OSE – Standard Supplementary Conditions

L. SE-355 – Performance Bond

M. SE-357 – Labor and Material Payment Bond

I. Technical Specifications

1. Insert all technical specifications into the project manual.
2. Include statement of special inspections in accordance with IBC Chapter 17 in the quality assurance section of project manual.

5.2.6 MULTIPLE BASE BIDS

In lieu of a single base bid plus alternates, the Agency should consider the use of multiple base bids. The following is an example of the use of multiple base bids:

Agency is seeking to construct a new office building. The Agency wants the option of terrazzo floors in lieu of carpeted floors throughout the building. Agency, in one solicitation, solicits a base bid for construction of the building with carpeted floors (base bid 1) and another base bid for construction of the building with terrazzo floors (base bid 2). Agency receives sealed bids from bidders W, X, Y, and Z. All four bidders are responsible. All four bidders submit a bid on base bid 1 but bidder Y does not submit a base bid on base bid 2. Bidder Y is the low responsive bidder on base bid 1 and bidder W is the low responsive bidder on base bid 2. If the Agency accepts base bid 1, it must make award to bidder Y. If the Agency accepts base bid 2, it must make the award to bidder W.

Notes: 1. Because each base bid is essentially a separate bid, Y's bid on base bid 1 was not rendered unresponsive by not bidding base bid 2. In other words, responsiveness on one base bid must be determined independent of the other base bids.

2. Pursuant to Section 11-35-3020(2)(c), unless there is a compelling reason to reject all bids, the Agency must award a contract by selecting one of the base bids and awarding a contract to the lowest responsive and responsible bidder on that base bid.

If the Agency objects to the use of multiple base bids and desires to use a single base bid with alternates, it should submit a request to OSE outlining the proposed alternates and the proposed basis of award. Preferably, alternates will only be add alternates and would not exceed three in number. Any approved alternates and the basis of award under that procedure must be set forth in detail in Article 5.4.2 of 00201-OSE Standard Supplemental Instructions to Bidders and the Bid Form, SE-330, must be modified to reflect that procedure.

5.2.7 SUBMITTAL REQUIREMENTS

The A/E with Agency's approval must submit the following to OSE for review:

1. Schematic Design documents and Estimate of Construction Cost, transmitted with the Form SE-271.
2. Design Development documents and Revised Estimate of Construction Cost, transmitted with the Form SE-271.
3. Construction Documents and Final Estimate of Construction Cost, transmitted with the Form SE-271.
4. Bid Documents transmitted with the Form SE-271.

NOTE: All submittals may not be required on all projects. A/Es are to contact OSE project manager for number of copies and necessary submittals.

5.2.8 OSE REVIEW AND APPROVAL PROCESS

OSE will review design and construction documents for projects exceeding the Agency's code certification. OSE can provide technical assistance to agencies in reviewing design and construction documents within the Agency's code certification.

OSE's review of design and construction documents for general compliance with codes does not relieve the Agency or the A/E of responsibility for knowledge of and compliance with all codes and regulations of other governing authorities. OSE may revoke any approval issued under the provisions of this Manual where OSE based its approval on any false statement or misrepresentation of fact in correspondence, drawings, specifications, or data.

NOTE: If there is a conflict between the requirements of any code, regulation, or standard regarding safety, health, energy-use compliance, or environmental compliance, the Agency or the A/E should request an interpretation from OSE project manager.

For scheduling purposes, the Agency and the A/E should allocate a total of 45 days for review of "properly completed" submittals. When the A/E provides a properly completed submittal, the review time will commence from the date of receipt of the submittal by OSE project manager until the date the review is completed.

OSE will provide written review comments to the Agency and the A/E upon completion of each stage of document review. If the Agency allows, the A/E may continue to work on the project, at its own risk, during OSE review periods. This does not relieve the A/E from complying with all OSE comments made during the review periods.

NOTE: The Agency or A/E may find the status of OSE reviews on its website.

<http://www.mmo.sc.gov/MMO/ose/MMO-ose-projects.phtm>

5.2.9 SCHEMATIC DOCUMENTS

To be "Properly Completed" the schematic documents submittal must meet the following minimum level of project information and project definition:

A. Complete Tables 5-3, 5-4 and 5-5 to extent information is known and applicable.

B. Site Plan showing the following:

1. Building;
2. Property lines;
3. Easements;
4. Encroachments;
5. Setbacks;
6. Streets;
7. Parking;
8. Existing contours;
9. Adjacent structures;
10. Utilities;
11. North Arrow; and
12. Other items defining the site (hazards, wetland, fire district, environmental issues, etc.).

C. Drawings showing the following:

1. Individual Spaces with names;
2. Complete means of egress;
3. Elevations sufficient to describe the building; and
4. Facilities for the physically disabled incorporated within the building.

5.2.10 DESIGN DEVELOPMENT DOCUMENTS

To be "Properly Completed" the design development documents submittal must, in addition to items required in schematic documents, meet the following minimum level of project information and project definition:

A. Complete Tables 5-1 through 5-14 to extent information is known and applicable.

B. Index to sheets.

C. Developed Site Plan including the following:

1. Site Access
2. Fire Apparatus access
3. Accessibility Information
4. New Topographic Features
5. New Utilities

D. Drawings showing the following:

1. Vertical Shafts
2. Vertical Chases

3. Elevations of Floors
4. Foundations
5. Floor Framing
6. Roof Framing
7. Typical Wall and Building Sections
8. UL Design Numbers for Rated Systems
9. Approximate size of special equipment (i.e. compressors, generators, transformers, electronic equipment racks, consoles, panels, distributing frames, hoists, and cranes)
10. Laboratory equipment layouts
11. Elevations
12. Unusual Features

NOTE: All fire and/or smoke-rated elements of the project (such as floors, ceilings, roofs, partitions, barriers and walls) are to be indicated on all disciplines.

E. Developed Life Safety Plans including the following:

1. Rated Walls with symbols
2. Rated Components
3. Details of Rated Assemblies
4. Egress and Exit Lighting
5. Complete means of egress
6. Exit capacities

F. Functional Layout of the following:

1. Mechanical
2. HVAC System
3. Special Equipment
4. Boiler Rooms
5. Plumbing
6. Sanitary Sewers Risers
7. Roof Drain Risers
8. Storm Water
9. Fire Protection
10. Electrical
11. Electronic Features

G. Status of all required permits

H. Project Manual:

1. Front-end Documents
2. Soils Report & Recommendations (if applicable)
3. Technical Specifications Outline: Complete outline of all divisions and sections with identified major systems of the project (including a completed hazards material report and Fire Sprinkler System Specification Sheet per SC Fire Marshal if applicable)

I. Other Documents: The designers should submit an outline of the IECC compliance methods they intend to use. See Construction Document submittal requirements for details.

5.2.11 CONSTRUCTION DOCUMENTS

Construction Documents must bear professional seals, dates, certifications, and signatures as required by law and regulation. The following project information is required:

A. Drawings completed, coordinated, and corrected shall have as a minimum; items indicated in the Design Development Documents submittal phase and additional items that may include:

1. Cover/Index
 - (a) Abbreviations

- (b) Symbols
 - (c) Legends
 - (d) Notations
 - (e) Location Map
- 2. Project Code Criteria
 - (a) Listing of all Codes applicable to project
 - (b) Project Code criteria as contained in Tables 5-1 through 5-15
- 3. Civil/Site/Landscape
 - (a) Building & Structures: existing and proposed
 - (b) Pedestrian & Vehicular accesses: existing and proposed
 - (c) Landscaping – hard & soft: existing and proposed
- 4. Architectural Drawings:
 - (a) Plans (life-safety items are to be submitted as separate plan, unless they are clearly shown on a single floor plan):
 - (i) Roofs
 - (ii) Layouts of storage shelving, casework or other specialties
 - (iii) Hazard Control areas
 - (b) Elevations
 - (i) Exterior elevations showing proposed floor-to-floor heights
 - (ii) Equipment or facilities for the physically disabled
 - (iii) Interior elevations of significant features
 - (c) Sections & Details of construction
 - (d) Openings, Finish & Other Schedules
- 5. Structural Drawings: as required to illustrate specific building design including sections and schedules
- 6. Fire Protection Drawings
- 7. Plumbing
 - (a) Water
 - (b) Sewer
- 8. Mechanical
 - (a) HVAC plans as necessary to assure function and compatibility with building fire protection system and fire-rated assemblies
 - (b) Mechanical, boiler and other special equipment rooms with equipment layout
 - (c) Details and/or sections of vertical risers
 - (d) Schedules
 - (e) Routing of systems
- 9. Electrical
 - (a) Power
 - (b) Lighting
 - (c) Schedules
 - (d) Fire alarm system components
 - (e) Communications and information technology components and equipment rooms
 - (h) Electrical risers, routing, panel wiring, grounding and other features
- 10. Other drawings may be required to fully identify the project

B. Project Manual completed, corrected, and coordinated to include the following:

- 1. Table of Contents
- 2. Front-end documents
 - (a) SE-310, pages 1 and 2, ready for signature by the State Engineer, with permits and approvals attached to page 2.
 - (b) Items identified in section 5.2.5 of this chapter
- 3. Soils Report, Hazardous Materials Reports and others informational data pertinent to the project
- 4. Specifications
 - (a) Technical Specifications
 - (b) The documents shall include the Fire Sprinkler System Specification Sheet, as published by the State Fire Marshal. The Fire Sprinkler System Specification Sheet shall be prepared, sealed, signed and dated by a South Carolina licensed professional engineer.

C. Other Documents:

1. Additional narrative, schedule, calculations, drawings and information required to demonstrate to OSE and Agency a thorough understanding of the project and compliance with codes.

2. Documents showing design compliance with the International Energy Conservation Code (IECC- 2006), for commercial buildings or portions thereof (not otherwise exempted). May be achieved by the following methods

(a) Meeting mandatory and prescriptive requirements of sections 502 (Building Envelope), 503 (Mechanical Systems), 504 (Water Heating), and 505 (Power and Lighting), or by satisfying the corresponding provision(s) in ASHRAE 90.1-2004 (Chapters 5 through 10) and by providing supporting documents (worksheets, forms, calculations, etc.) for each chapter or section.

(b) Alternatively, provided that all IECC mandatory provisions have been met, compliance may be demonstrated using section 506, "Total Building Performance", where an approved simulation, using acceptable parameters, indicates that the proposed design energy cost does not exceed that of the standard design (see IECC definitions). The design professional must submit documentation in accordance with IECC - 506.5. The corresponding ASHRAE 90.1 provisions is Chapter 11, "Energy Cost Budget Method". The documentation requirements are listed in 11.1.5.

NOTE: OSE cautions the designer to seek concurrence with OSE prior to using, procuring, or otherwise investing in simulation software or services.

3. Page 2 of the form SE-310

(a) Final Revised Estimate of Construction Cost with Agency approval

(b) Status of permits, zoning appeals, BAR approvals, etc.

5.2.12 BIDDING DOCUMENTS

A. A copy of the final Bidding Documents as printed and issued to prospective bidders, which incorporate the approved resolution of all previous review comments.

B. The Bidding Documents are identified in Appendix A.